From: Commander Carrier Air Group FIVE  
To: Commanding Officer, U.S.S. VALLEY FORGE (CV-45)  

Subject: Report of Operations for period 16-31 July 1950  
(Against North Korean invasion forces)  

Ref: (a) Commanding-3 Conf. ltr, ser 066 dated 19 July 1950  

Enclosure:  
(1) Organization  
(2) Narrative of Operations  
(3) Tabulation of Sorties and Hours Flown  
(4) Material Damage  
(a) Enemy  
(b) Own  
(5) Personnel Casualties, Enemy and Own  
(6) Corrective Action Taken by Originator  

1. Operations against North Korean invasion forces were conducted by Air Group FIVE on 16, 19, 22, 23, 26, 28 and 29 of July as directed by Commander Carrier Division ELEVEN in compliance with Commander Seventh Fleet Secret Op Orders #10 and 11-50.  

2. Comment and Recommendations:  
   a. Air Operations -  
      (1) For large strikes on a definite target and for "armed reconnaissance" patrols the operation schedule consisted of a complete 32-plane prop launch twice a day with both flights overflowed by two 8-plane waves of jets.  

         For controlled close-support operations four separate three (3) hour prop launches of 12-16 aircraft were scheduled plus four 8-plane jet sweeps. This kept airplanes over the target area at intervals of every other hour and a half throughout the day. Two attack carriers operating together could maintain continuous support over the target.  

   b. Tactics -  
      (1) Since no air opposition was encountered and anti-aircraft fire was, in general, light or non-existent, individual and repeated
runs could be made to insure greater accuracy and more thorough target destruction.

(2) Targets 125-140 miles away were hit by jet divisions flying at all times beneath a 5000 foot ceiling. Going in with 80% engine rpm at 3000 feet and 210 knots IAS allowed 3600 lbs. of fuel still aboard when reaching the target. 1600 lbs. of this could be used over the target either by:

(a) 28 minutes of continuous strafing at 86%, or

(b) 18 minutes of high speed strafing, or combat, at 100%.

A return to the carrier at 72%, 200 kts. IAS, 300 feet altitude gave a landing reserve of 1000 lbs. of fuel.

(3) Because of the F9F's speed fairly flat strafing runs were employed. This allowed a longer sighting period without sacrificing any safety.

(4) Moderate success was obtained by the prop planes against tunnels and bridge abutments by skip bombing or mast head attacks with bombs having a 4-5 second delay fuse.

(5) Armed reconnaissance patrols and ground support work are best controlled by using a flight of no more than four planes to a selected target.

(6) At times the shortage of VF (props) for escort required that the VA squadron form its own cover. In a four division VA flight, two divisions are used as base element in a VA defense formation and the other two fly cover. In a three division flight of VA aircraft, one division is the base element and two fly cover.

c. Anti-Submarine Patrol -

(1) For a more efficient ASW attack team, it would be highly desirable to have VA(S) and VA(W) aircraft in the same unit. The different investigator pilots and aircraft now being employed quite often lack the specialized training and equipment necessary for successful hunter killer tactics.

(2) Since efficiency of the radar operator is greatly reduced after two hours of operation, flights should be limited to three hours when practicable.
d. Aircraft Ordnance -

(1) The following ordnance and fusing is considered desirable for the targets indicated:

<table>
<thead>
<tr>
<th>Target</th>
<th>Weapon</th>
<th>Fuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) A/C on ground</td>
<td>20MM</td>
<td>VT</td>
</tr>
<tr>
<td>(b) A/C retailed or personnel</td>
<td>Bombs</td>
<td></td>
</tr>
<tr>
<td>(c) Locomotives</td>
<td>20MM and rockets</td>
<td></td>
</tr>
<tr>
<td>(d) Oil Cars</td>
<td>20MM and rockets</td>
<td></td>
</tr>
<tr>
<td>(e) Power Stations</td>
<td>20MM, rockets, small bombs</td>
<td></td>
</tr>
<tr>
<td>(f) Bridges</td>
<td>2000 pound (dive bomb)</td>
<td>.025</td>
</tr>
<tr>
<td></td>
<td>1000 or 500 lb (skip bomb)</td>
<td>4-5 sec. delay</td>
</tr>
<tr>
<td>(g) Factories</td>
<td>Bombs</td>
<td>Instant or .025</td>
</tr>
<tr>
<td>(h) RR Yards</td>
<td>Bombs and rockets</td>
<td></td>
</tr>
<tr>
<td>(i) Tunnels</td>
<td>Bombs</td>
<td>4-5 sec. delay</td>
</tr>
<tr>
<td>(j) Vehicles-trucks</td>
<td>20MM and rockets</td>
<td></td>
</tr>
<tr>
<td>(k) Tanks</td>
<td>Napalm and rockets (SAP)</td>
<td></td>
</tr>
<tr>
<td>(l) Boats</td>
<td>All ordnance</td>
<td></td>
</tr>
</tbody>
</table>

e. Electronics, Countermeasure -

(1) Enemy radar has been detected in several cases but since countermeasure transmitters are not yet available our "Q" planes were unable to do any jamming.

f. Communications -

(1) The 4-digit "tactical mission" voice call signs for individual aircraft as prescribed in section 7 of JANAP 119(A) are unsatisfactory due to:

(a) Awkwardness because of length.

(b) The difficulty of quick association of the call with the pilot or aircraft.
A tally-ho message must be rapidly made and must immediately identify the sender. Also in the case of operating with a Tactical Air Coordinator in close support work, simplicity and clarity of call signs between aircraft is imperative. Use of side numbers would be best for both the above examples and for all cases of aircraft on tactical missions, flight leaders being an exception. This is authorized by the note under paragraph 426 of JANE 119(A).

(2) To date no plane in the Air Group has been called upon to use authentication or recognition signals although much time and effort have been spent on the dissemination to all pilots of the proper daily codes. For the current type operations of penetrating strikes and close support it does not seem necessary that the pilots of our single seat aircraft need be encumbered with this extra non-essential data. This is especially true of the recognition codes since none of our aircraft are equipped with either a Very's pistol or an Aldis lamp.

g. Air Intelligence -

(1) Non-flying Air Intelligence Officers are still urgently needed by the squadrons of the Air Group. The aviators of the Group, now acting in the ADC capacity, have to date done an excellent job in addition to their primary duty of flying plus other collateral squadron duties. However, this overload situation has, in a couple of instances, resulted in inadequate briefing and debriefing.

(2) Photo coverage and intelligence information, collected by other sources, should be expeditiously disseminated to the lower echelons, namely the squadrons that will actually be participating in the mission. At times in the past it has been noted that such target information has not reached the participating elements until the mission had been completed.

(3) The best charts available in any quantity for our close support work have been the World Aeronautical Charts with a scale of 1:1,000,000 which is entirely inadequate for target pin-pointing. A few grid charts of a more appropriate scale were issued but they lacked contour and riverline coloring and when covered over with the necessary grid markings they were most difficult to read.
h. Personnel -

(1) The transition from peace to wartime operations has indicated an immediate need in the Air Group for non-flying Air Intelligence and Maintenance Officers.

Increased complement of ordnance, electronic, and aviation machinist ratings is also needed. With our present peacetime strength of 542 men, less 75 detailed to the ship, an extended period under combat conditions would be accomplished only with difficulty. It has been during these combat periods that the shortage of ordnancemen has been most keenly felt.

1. Material Discrepancies -

(1) Aircraft -

(a) In an effort to prevent any future F9F-3 operational losses due to partial loss of engine power after catapulting it is recommended that a friction lock be installed on the throttle quadrant and also that the fuel system and its emergency features be thoroughly investigated for possible malfunction due to the accelerating effects from the catapult shot.

(b) Hydrolobe now in use in the F9F-3 hydraulic system is causing deterioration of seals and rubber parts and failure of hydraulic valves. Hydraulic fluid AR-O-366, although inflammable, is recommended.

(c) Wartime operating conditions revealed the following facts regarding the F4U-4R:

(i) FB-19 spark plugs have given the best performance in the R-2800-42R engine.

(ii) Oil cooler shut off valves should be installed on an urgency basis.

(iii) Armor plate protection is desirable if planes are to be used for extensive close support work.

(iv) Activate war emergency power equipment and install all up to date service changes before the aircraft leaves the States.

(2) Ordnance -

(a) On the Corsairs and Skyraiders, the Mark 9, Mod 2 & 3 rocket launchers are frequently rendered unserviceable under the stress of an arrested landing with HVARs aboard and should be
modified. The Mark 55 bomb rack should be added to the Corsair configuration, however, it should first be modified to withstand arrested landings with stores aboard.

(b) It is strongly recommended that future VA aircraft have four forward firing 20mm guns. Also the AD spare parts list should be enlarged to include 200 Mark 55 bomb racks, 100 Mark 9, Mod 3 rocket launchers, 2 20mm gun kits, four spare guns and forty ammunition cans.

(c) In the F4U-3N, improper functioning of the link stripper on the 20mm gun allows the rounds to enter the feed mechanism in a canted position, jamming the gun and oftentimes rupturing the round. An improved stripper is recommended.

(d) Ordnance difficulties with the F9F-3 were as follows:

1. Wing gun camera - recommend re-wiring to permit ground checks without requirement of 30% generator output of plane system.

2. Fire control system - recommend re-wiring to make separate from armament system. Damage to bearings in the sight result from arrested landings and deck spotting. Should be energized when battery switch is turned on.

3. Booster motors - recommend electrical cut-off switch to relieve pressure when gun jamming occurs. At present, operation of the booster continues after a jam occurs and causes rupturing of the ammunition chutes.

4. Elevating bolt - recommend shortening to permit removal of instrument panel without requiring removal of the gun sight.

5. Split cartridge ejection doors - recommend changing to a single door. The split type door is presently bending upward permitting a crack sufficient for an empty round to lodge and prevent doors from opening.

6. Gun heater cannon plugs - recommend installing between the number 1 and 2 guns and 3 and 4 guns, preventing damage to gun heater wires when removing the guns.

7. Radio compartment bolts - recommend countersinking or shielding to prevent personnel injury during loading.
(8) Muzzle covers — recommend a celluloid-muzzle cover which does not require removal prior to firing. In the event of aborted firing missions, protection of the barrels will thus be provided.

(2) Sliding nose section — hangar deck spots preclude opening the nose for routine maintenance and loading operations, which is considered unsatisfactory.

(10) Cartridge and link collecting space — capacity or shape, even with the link deflectors installed, is inadequate. Jams are occurring in the ejection chute after approximately 500 rounds have been fired.

(21) Gun camera magazines — recommend pre-loaded, fifty foot magazines stock No. 10-E-32091-100 be provided.

(22) Outboard ammo cans — partial ammo loads, if not expended, move forward on arrested landing causing ammo can securing pins to shear or bind and allow can to move forward. Recommend a securing rod to retain can in proper position.

3. Summary of Recommendations:

It is recommended that:

a. Skip and mast head bombing be included in the training syllabus of the dive-bomber and fighter-bomber propeller squadrons.

b. The ASW attack team of VA(S) and VA(W) aircraft and pilots train and operate in the same squadron or unit.

c. Side number tactical call signs be used between aircraft on “tactical missions”.

d. The carrying of authentication codes and recognition signals should not be required of single seat aircraft pilots when conducting strike missions. If necessary, a simplified code should be used.

e. All aircraft be completely outfitted with radio gear and latest service changes before being sent to the forward area.

f. Non-flying Intelligence Officers be assigned the Air Group and that the squadrons personnel be increased to wartime complement, especially in the rates of ordnance, electronics and aviation machinists.
g. Complete target information be given the strike pilots as early as possible prior to the mission and that appropriate grid charts be provided all pilots engaged in close support work.

h. The following corrective action be taken in regards aircraft and ordnance discrepancies of the F9F-3:

1. Install friction lock on throttle quadrant.

2. Change the fluid in the hydraulic system to a type that will not deteriorate the seals and rubber fittings.

3. Rewire the fire control (gnsight) system to prevent damage to sight bearings on arrested landings.

4. Install an electrical cut-off switch on the booster motors to relieve pressure when gun jamming occurs.

5. Countersink or shield radio compartment bolts to prevent injury to ordnance personnel.

6. Increase capacity or change shape of cartridge and link collecting sprocket to prevent jamming.

7. Install a strong enough securing rod in the outboard here arms cans to prevent the cans from breaking loose on an arrested landing with partial armor remaining.

i. The following corrective action be taken in regards aircraft and ordnance discrepancies of the F4U-4B:

1. Install armor plate protection.

2. Install oil cooler shut-off valves.

3. Use only RB-19 spark plugs.

4. Activate the war emergency power equipment.

5. Redesign the Mark 9, Mod 2 and 3 rocket rails to withstand arrested landings with 5" HVARs.

6. Provide the Corsair with the Mk. 55 bomb racks modified to withstand arrested landings while carrying external stores.

j. The corrective actions necessary for the AD are:

1. Modify the rocket launchers and Mk. 55 bomb rack the same as the F4U-4B.

2. Install four forward firing 20mm on the future VA aircraft.

H. F. Lantham
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"ORGANIZATION" - CARRIER AIR GROUP FIVE

CVG-5 Commander H. P. LAMHAN
No Aircraft
4 Pilots

VF-51 Lieutenant Commander A. D. POLLOCK (Commanding Officer)
16 F6F-3 Aircraft
16 Pilots on Board

VF-52 Lieutenant Commander W. E. LAMB (Commanding Officer)
14 F9F-3 Aircraft
18 Pilots on Board

VF-53 Lieutenant Commander W. R. PITTMAN (Commanding Officer)
8 FMU-4B Aircraft
18 Pilots on Board

VF-54 Lieutenant Commander D. K. ENGLISH (Commanding Officer)
12 FMU-4B Aircraft
15 Pilots on Board

VA-55 Lieutenant Commander M. D. HODSON (Commanding Officer)
14 AD Aircraft
20 Pilots on Board

VC-3 Detachment Lieutenant Commander W. E. HENRY (Officer in Charge)
2 FMU-5N
3 AD-3N
6 Pilots on Board

VC-11 Detachment Lieutenant Commander S. M. SHELTON (Officer in Charge)
3 AD-3W Aircraft
4 Pilots on Board

MAG-12 Detachment Captain J. V. BOOKER, USMC (Officer in Charge)
2 FMU-5P
3 Pilots on Board

NOTE: Figures reflect number of flyable planes and qualified pilots available at commencement of operations.

ENCLOSURE (1)
Offensive operations against North Korean forces were conducted during this period on the following days of July: 18, 19, 22, 25, 26, 28 and 29.

On the morning of the 18th precautionary cover was provided for the unopposed amphibious landing of the 1st Cavalry Division at Pohang, South Korea. A troop strike in the late afternoon of the 18th did considerable damage to the Konam Oil Refinery. In general, the remainder of the flights and sweeps on the 18th, 19th, 22nd and 25th were "armed reconnaissance" in nature and covered an area inland from Pohang to north of Hamhung on the east coast and on the west coast ranged from Kwangju north to Kaesong going inland as far as Namyon. Targets attacked and damaged were airfield installations, railroad facilities, locomotives and rolling stock, bridges, power stations, oil tanks, small boats, factories, troops and vehicles.

On 26, 28 and 29 of July close support operations were conducted under control of Air Force Tactical Air Coordinators in an area along the front line from Hadong north to Hamchang. Targets were mainly troops, armor, and transportation facilities.

The HMS TRIUMPH operated with us at all times, except July 22, providing CAP and ASW.

ENCLOSURE (2)
### Tabulation of Sorties and Hours Flown

**15 - 31 July 1950**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Jet Sorties</th>
<th>Jet Sorties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet Hours</td>
<td>260.3</td>
<td>157</td>
</tr>
<tr>
<td>Prop Hours</td>
<td>1344.1</td>
<td>491</td>
</tr>
<tr>
<td>Total Hours</td>
<td>1604.4</td>
<td>648</td>
</tr>
</tbody>
</table>

**Sorties over Korean targets:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet</td>
<td>157</td>
</tr>
<tr>
<td>Prop</td>
<td>416</td>
</tr>
<tr>
<td>Total</td>
<td>573</td>
</tr>
</tbody>
</table>
Score of damage inflicted against Korean targets by Carrier Air Group FIVE during the period 16–30 July, 1950. The VALLEY FORGE launched the Air Group planes from both sides of the Korean peninsula in order to get them as close to the targets as possible. During the period 25–29 July, under the direction of TAC our planes were able to give valuable support to the ground forces in the critical southwest sector of Korea.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DESTROYED</th>
<th>PROBABLY DESTROYED</th>
<th>DAMAGED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft</td>
<td>31</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Locomotives</td>
<td>27</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Train (24 cars oil or ammo)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Railroad Cars</td>
<td>3</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Tank Cars</td>
<td>6</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Rail Yards</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Railroad Carhans</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Railroad Bridges</td>
<td>2</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Railroad Tunnels</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Railroad Handcar</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wonsan Oil Refinery</td>
<td>75-100%</td>
<td>-</td>
<td>-c</td>
</tr>
<tr>
<td>Oil Storage Tanks (large)</td>
<td>11</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Oil Storage Tanks (small)</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Refinery (small)</td>
<td>-</td>
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<td>1</td>
</tr>
<tr>
<td>Highway Bridge</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Factories</td>
<td>50%</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Chemical Plant</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Cement Plant</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Warehouses</td>
<td>-</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Power Stations (Transformer)</td>
<td>3</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Hangers</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Trucks</td>
<td>77</td>
<td>24</td>
<td>65</td>
</tr>
<tr>
<td>Jeeps</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Reconnaissance</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Armored Cars or Jeeps</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Buses</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Weapons Carrier</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Horse Carts</td>
<td>6</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Motorcycle and Sidecar</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Tanks</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Towns or Villages</td>
<td>1</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Aircraft Installations</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Ammo dump (small)</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>M/G Nest</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Field Artillery Piece</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>TYPE</td>
<td>DESTROYED</td>
<td>PROBABLY DESTROYED</td>
<td>DAMAGED</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>--------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Small Freighters</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gunboats</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Barges</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Junka (large)</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Fishing Boats</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Tugs</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

One road was blocked by landslide. The possibility that many of the trucks which did not burn were hit on successive strikes must be considered.

An undetermined number of personnel were killed in attacks on villages, trucks and other installations. Other equipment was probably damaged in these strikes.

H. F. LANHAM

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ENCL (4A)
B. Self

2 F4U-4 lost when forced down due to enemy AA action.

1 AD-4 lost when it dragged a wing on a hillock, crashed and exploded over enemy territory during a strafing run.

1 AD-4 Class "C" damage from enemy AA or own bomb blast.
(Repairable aboard ship)

2 F9F-3 operational losses. Partial loss of power after take-off.

13 other aircraft received minor repairable damage from light and medium AA fire.

ENCLOSURE (4)(b)
A. Enemy

Unknown


ENCLOSURE (5)
1. Policies concerning operations and tactics mentioned in the basic letter of this report have already been placed into practice by this Air Group.

2. AMO and Maintenance Officers were requested by despatch. No Air Intelligence Officers have yet reported to the Group.

3. ACCMs or other appropriate reports have been submitted on all aircraft discrepancies noted within this report.